ARCTIC DATA INVENTORY AND APPRAISAL – VOLUME 18
Canada Basin: Chemical Oceanography 1926 through 1983

by

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Canadian Data Report Of Hydrography and Ocean Sciences

These reports provide a medium for the documentation and dissemination of data in a form directly useable by the scientific and engineering communities.

Generally, the reports will contain raw and/or analyzed data but will not contain interpretations of the data. Such compilations will commonly have been prepared in support of work related to the programs and interests of the Ocean Science and Surveys (OSS) sector of the Department of Fisheries and Oceans.

Data Reports are produced regionally but are numbered and indexed nationally. Requests for individual reports will be fulfilled by the issuing establishment listed on the front cover and title page. Out of stock reports will be supplied for a fee by commercial agents.

Regional and headquarters establishments of Ocean Science and Surveys ceased publication of their various report series as of December 1981. A complete listing of these publications and the last number issued under each title are published in the *Canadian Journal of Fisheries and Aquatic Sciences*, Volume 38: Index to Publications 1981. The current series began with Report Number 1 in January 1982.

Rapport statistique canadien sur l'hydrographie et les sciences océaniques

Ces rapports servent de véhicule pour la compilation et la diffusion des données sous une forme directement utilisable par les scientifiques et les techniciens.

En général, les rapports contiennent des données brutes ou analysées mais ne fournissent pas d'interprétations des données. Ces compilations sont préparées le plus souvent à l'appui de travaux reliés aux programmes et intérêts du service des Sciences et Levés océaniques (SLO) du ministère des Pêches et des Océans.

Les rapports statistiques sont produits à l'échelon régional mais sont numérotés et placés dans l'index à l'échelon national. Les demandes de rapports seront satisfaites par l'établissement auteur dont le nom figure sur la couverture et la page de titre. Les rapports épuisés seront fournis contre rétribution par des agents commerciaux.

Les établissements des Sciences et Levés océaniques dans les régions et à l'administration centrale ont cessé de publier leurs diverses séries de rapports depuis décembre 1981. Vous trouverez dans l'index des publications du volume 38 du *Journal canadien des sciences halieutiques et aquatiques*, la liste de ces publications ainsi que le dernier numéro paru dans chaque catégorie. La nouvelle série a commencé avec la publication du Rapport n° 1 en janvier 1982.

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PREFACE

These catalogues are produced by the Data Assessment Division at the Institute of Ocean Sciences. Joint government and industry contract projects have catalogued marine data sets their focus being primarily upon oceanography and fisheries. Data set quality appraisals are included to assist in establishing the usefulness of certain data for particular kinds of analyses and the confidence to be placed in interpretations. These appraisals will assist in setting priorities for incorporating the most useful data in the national Marine Environmental Data Service (MEDS) archives. Additional uses include research planning (especially for climatological studies), and the provision of the best available resume of marine data sources for environmental assessments.

The continuing emphasis on Arctic offshore development activity has emphasized the need to review the sufficiency and suitability of available scientific information for design, regulatory and planning purposes. This review has been divided into three phases: (1) compilation and appraisal of all existing data sets; (2) analysis of the suitability of the historical data for contributing to questions of particular interest; and (3) analysis and interpretation of data and estimation of the scientific confidence in answering particular questions. This report on the chemical oceanographic data of the Canada Basin - Arctic Ocean is a contribution to the first phase.

Brian Smiley and Larry de March
Scientific Editors
Arctic Data Compilation
and Appraisal Series

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ABSTRACT

D.J. Thomas, R.W. Macdonald and M. Robinson. 1986. Arctic Data Compilation and Appraisal. Volume 18. Canada Basin - Arctic Ocean: Chemical Oceanography. 1926 through 1983.

Can. Data Rep. Hydrogr. Ocean Sci. 5: (Volume 18) 109 pp.

This volume is one of a group of catalogues designed to compile and appraise marine data sets for the Canadian Arctic. For ease of reference, the group has been organized with its subject matter divided into three disciplines: physics, chemistry and biology. The Arctic has been arbitrarily divided into seven geographical areas to include, where possible, major oceanographic regions. The format has been structured to facilitate comparison between subjects and regions. With such a large undertaking it is not possible to provide all reports at once. Therefore catalogues which are presently available in the series are indicated on the inside back cover of each volume.

Data collection is a continuing process and further updates of the catalogues are planned. Readers are invited to submit corrections and additions by writing the issuing establishment. These corrections will be incorporated in on-line computerized data set listings; they will be continuously available upon request.

SOMMAIRE

D.J. Thomas, R.W. Macdonald and M. Robinson. 1986. Arctic Data Compilation and Appraisal. Volume 18. Canada Basin - Arctic Ocean: Chemical Oceanography. 1926 through 1983.

Can. Data Rep. Hydrogr. Ocean Sci. 5: (Volume 18) 109 pp.

Le présent volume fait partie d'un groupe de catalogues destinés à compiler et à evaluer les séries de données marines sur l'Arctique canadien. Pour plus de commodité, la question traitée est structurée en trois grandes disciplines: physique, chimie et biologie. L'Arctique a été divisé arbitrairement en sept régions geographiques qui englobent autant que possible les grandes régions océanographiques. Les catalogues sont presentés de façon à faciliter la comparaison entre les sujets et les régions. Le domaine est si vaste qu'il est impossible de fournir tous les catalogues en une seule fois. Les catalogues de la série actuellement disponibles sont indiqués à la fin de chaque volume à l'interieur de la couverture.

La collecte des données est un processus permanent et il est prévu de mettre à jour les catalogues par la suite. Les lecteurs sont invités à soumettre par écrit les corrections et les additions à l'établissement auteur. Ces corrections seront traitées en direct sur ordinateur et incorporées aux listes qui pourront être obtenus sur demande.

ARCTIC DATA INVENTORY AND APPRAISAL

VOLUME 18

CANADA BASIN: CHEMICAL OCEANOGRAPHY

Volume 18: Canada Basin - Arctic Ocean: Chemical Oceanography.

VOLUME ABSTRACT

This inventory contains a catalogue of 134 chemical oceanographic data sets from offshore waters of Canada Basin - Arctic Ocean during the period 1926 - 1983. The inventory includes commonly-measured substances such as dissolved oxygen, major and minor elemental components, nutrients and less frequently measured substances such as trace elements, hydrocarbons and chlorinated hydrocarbons. Suspended particulate matter (although not a truly chemical quantity) is also included. Data sets are included for sea ice, sea water, sediments and biota. A geographical index and alphabetical references (by data set number) are also included. Unlike other catalogues of this series, only Table 1 (general details of the sampling excursions) is presented here. Data set maps, measurement details and ratings, and station locations were not prepared; it is our plan to do so in the future.

Key Words: Canada Basin, Arctic Ocean, chemical oceanography, data sets, inventory, dissolved oxygen, nutrients, heavy metals, hydrocarbons, chlorinated hydrocarbons, suspended particulate material, sediments, biota.

1. INTRODUCTION

This inventory comprises 134 data sets of chemical oceanographic data collected in the Canada Basin - Arctic Ocean during the period 1926 - 1983. The quantity and type of data are distributed irregularly over this time period with the bulk of the data collection occurring after 1960 as shown in Figure 1.

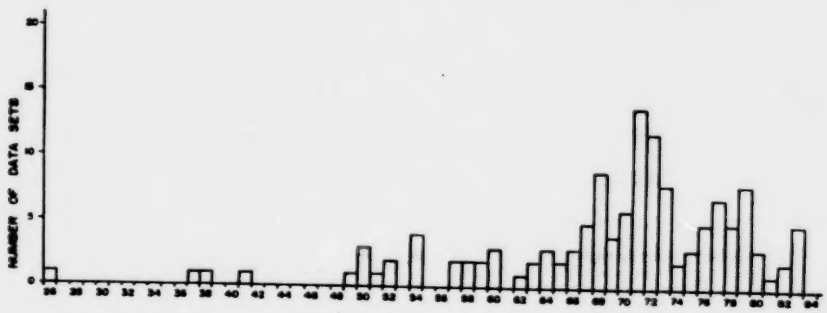

Figure 1 Yearly distribution of chemical oceanographic data sets for the Canada Basin - Arctic Ocean.

The objective of this inventory was to compile all available chemical oceanographic data sets from the Canada Basin - Arctic Ocean waters located within Map Area 2 (Figure 2A) into a single data bank. Place names are indicated in Figures 2B and 2C. No attempt was made to appraise the quality of the data or to map the station locations as in earlier inventories (e.g., Thomas et al. 1986). This task will be addressed in the future.

The inventory is ongoing. As new data and previously inaccessible data become available, they will be added to a computerized data base maintained at the Institute of Ocean Sciences, Sidney, B.C. Information about new data sets, older data sets which do not appear in this inventory or errors in this inventory, should be submitted in writing to the Institute of Ocean Sciences.

Wherever possible, formats in this inventory are consistent with those used in the Arctic Data Compilation and Appraisal Series (IOS, 1985).

1.1 The Study Area

The surface area of the Canada Basin Study Area (Figure 2A) is immense, about two million square kilometres, or roughly the size of British Columbia, Alberta and Saskatchewan combined. Included are the portions of the Arctic Ocean between 28 and 180±W longitude, as well as the bordering continental slopes and shelves of northern Greenland, the Canadian archipelago and Alaska.

The major bathymetric feature is the Canada Basin, which comprises almost half the study area and has depths exceeding 3000 m. North of the Canada Basin are three submarine ridges, the Alpha, Mendeleyev and Lomonosov ridges. The latter rises to depths as shallow as 1300 m. The Makarov Basin lies between the Lomonosov and Mendeleyev ridges, and is separated from the Canada Basin by a sill of between 2000 and 2500 m depth. West of the Canada Basin lies the Chukchi Shelf and the Northwind Ridge/Chukchi Plateau extension. The study area also includes the Alaskan Beaufort Sea slope and shelf, as well as the coastal waters off the Queen Elizabeth Islands and northern Greenland.

Although the study area is immense, the amount of oceanographic data collected to the present has been limited by the harsh climate and the sea-ice which covers much of the area. Open water is confined largely to the coastal regions and to the summer period. The breadth of open water at the coast can vary from negligible to a few hundred kilometres offshore, depending on wind and melt conditions.

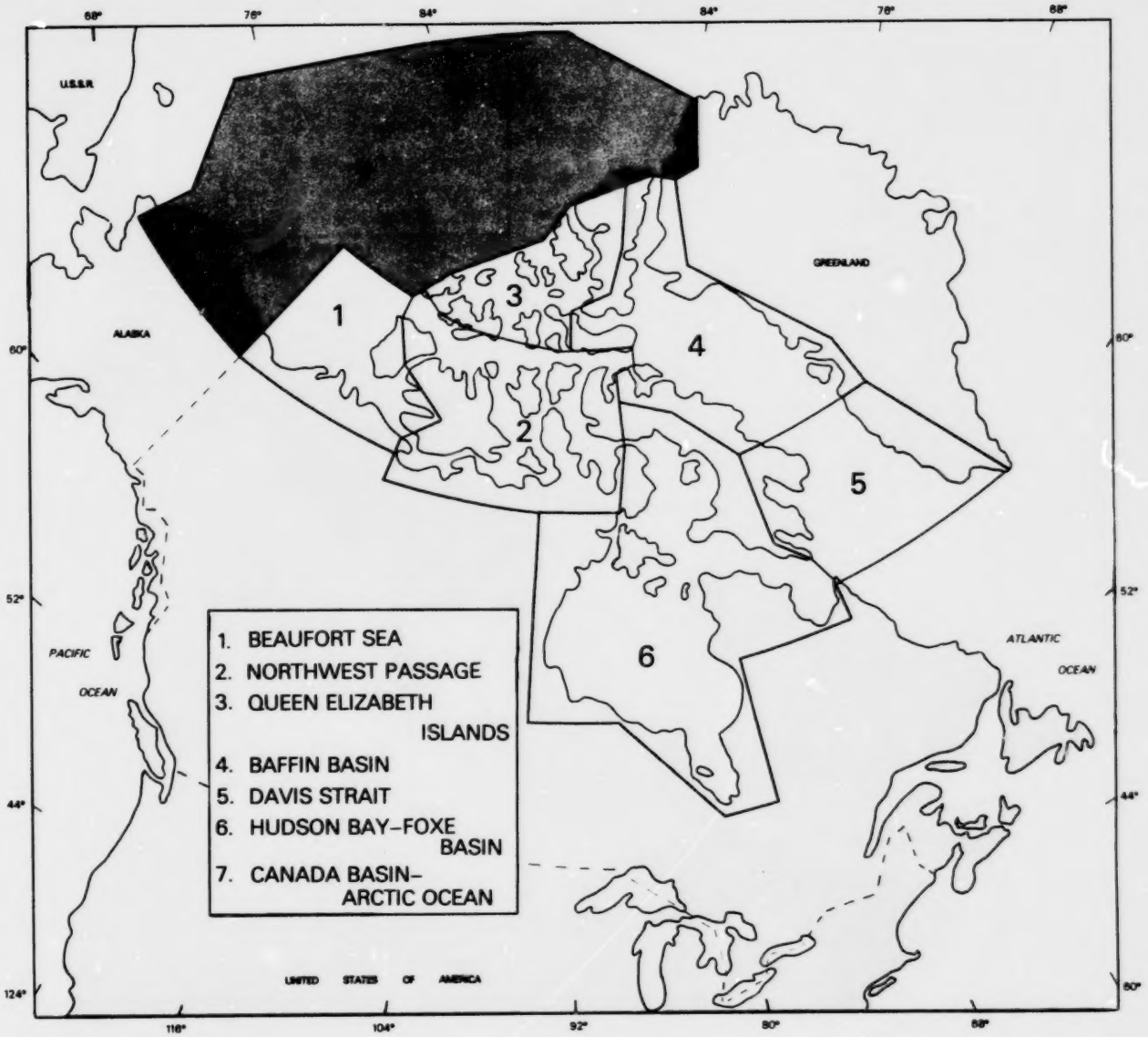

Figure 2A. The area (7) covered by this volume is shaded on the map above.

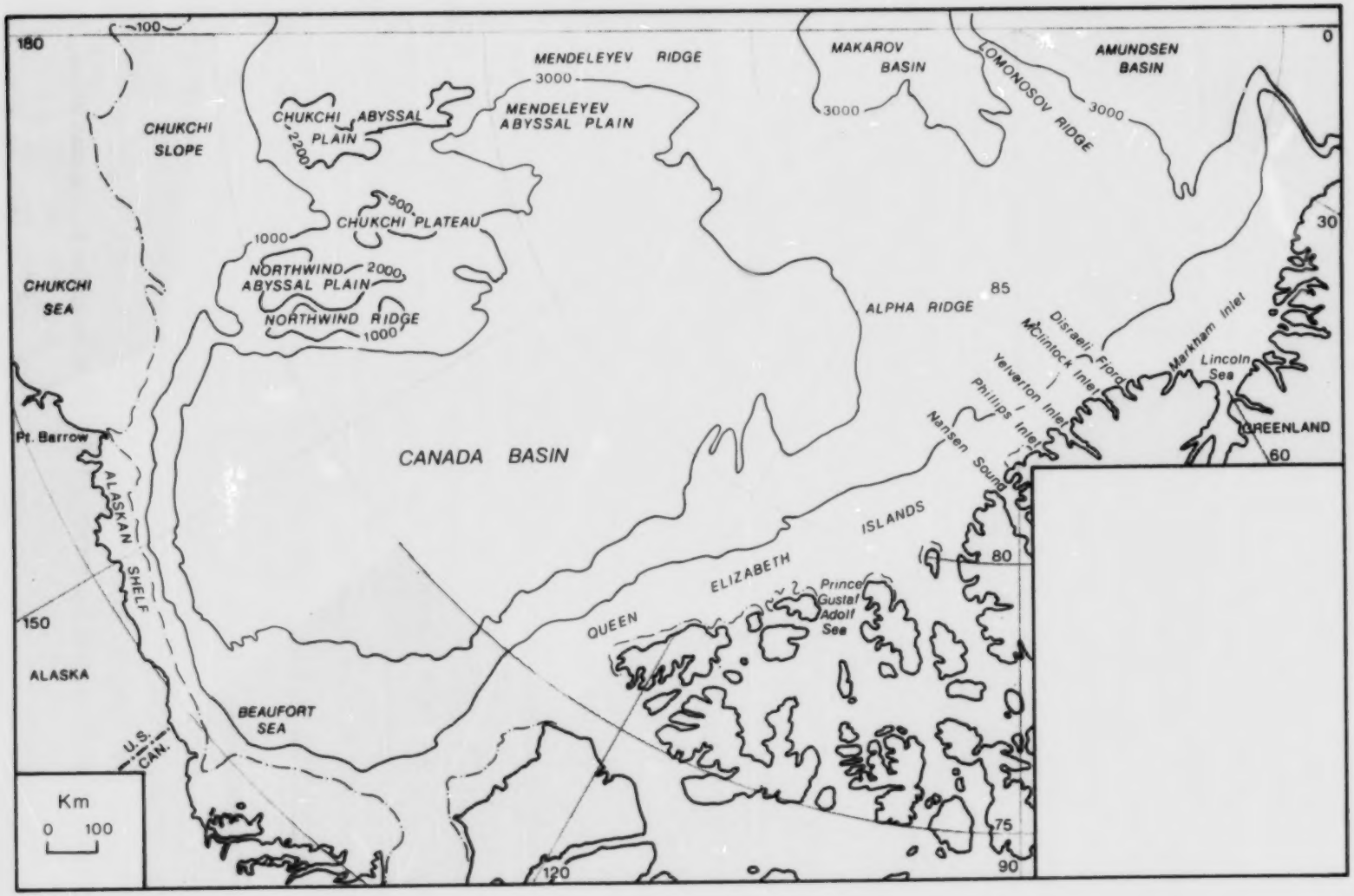

Figure 2B. Place names in the Canada Basin study area. Depth contours are in metres.

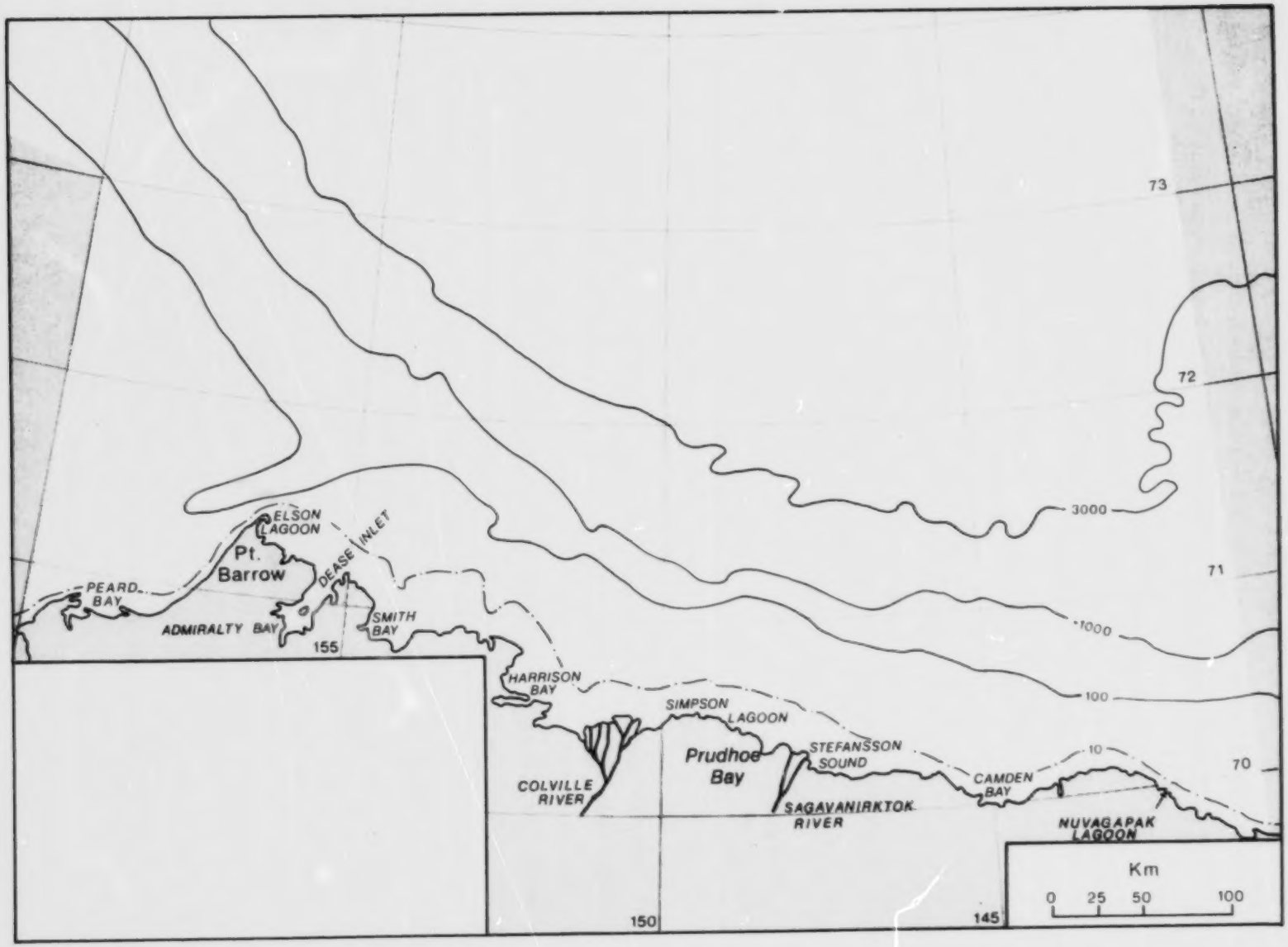

Figure 2C. Place names for the Alaskan coastal area. Depth contours are in metres.

Because of the ice coverage, data over most of the area have been obtained by landing aircraft on the ice, and from drifting ice stations. Only in the Alaskan coastal regions have surface vessels been effective in the collection of oceanographic data.

2. CHEMICAL DATA PRESENTATION: Types of Data

All chemical data have been grouped according to the environmental medium or compartment in which they are found, as follows:

Medium	Constituents Included
Sea Ice	- dissolved or occluded
Water Column (Sea Water)	- dissolved constituents - particulate constituents
Sediments	- surficial sediments - sediment cores (interval sampling) - interstitial pore waters
Biota (flora and fauna)	- seawater-dwelling organisms - bottom sediment dwelling organisms - marine mammals - marine birds

The inventory includes all available data of a "chemical nature". This includes commonly-measured substances such as dissolved oxygen, major and minor elemental components, nutrients and less frequently measured substances such as trace elements, hydrocarbons and chlorinated hydrocarbons. Turbidity and suspended particulate material are not truly chemical quantities in the classical sense, but are included in the inventory because they are important factors in the interpretation of chemical data and because they are more logically included with the chemical inventory rather than the physical or biological inventories.

The largest amount and most diverse data are found for water column constituents. Field-based analyses of samples at the time of collection have been rare because most chemical analyses require specialized or sophisticated equipment. Water samples have been frequently processed in the field to the stage where sample preservation is convenient and then returned to the laboratory for analysis. Samples for dissolved oxygen and pH analysis, on the other hand, have been routinely analysed in the field shortly after collection. Other determinations which can and have been

made in the field include the reactive nutrients although these have also been preserved and returned to the laboratory. Measurements have been made rarely in situ, and then only for dissolved oxygen.

The other types of samples: biota and sediments have been obtained in decreasing quantities respectively and all have been analysed exclusively in the laboratory after preservation for some extended period of time. A summary of the chemical data types included in the inventory is shown in Table I.

TABLE I

A SUMMARY OF CHEMICAL DATA TYPES INCLUDED IN THE DATA INVENTORY AND THEIR FREQUENCY OF OCCURRENCE (NO. OF DATA SETS) FOR EACH SAMPLING MEDIUM

CHEMICAL CONSTITUENT	SEA WATER	SEA ICE	SEDIMENT	BIOTA
adenylate				
adenosine diphosphate (ADP)			2	
adenosine-5-monophosphate (AMP)			2	
adenosine triphosphate (ATP)	2		2	
total			2	
aliphatic hydrocarbon (AlHC)			1	
alkalinity	2	1		
total	1			
aluminum	1		3	
aluminum oxide			2	
americium-241	1			
anthracene			1	
antimony			1	
aromatic hydrocarbon (ArHC)			1	
arsenic			5	
barium	1		4	1
benzene extractable compounds (BEC)	1		1	2
beryllium			1	
beryllium-10			1	
boron			1	
bromine (as bromide ion)	5			
cadmium	2			1
calcium	7		6	
calcium carbonate	5		7	
calcium oxide			2	
carbon	1		7	
carbonate			22	
carbon dioxide	4	2		
$^{13}C/^{12}C$ isotope ratio ($\delta^{13}C$)			2	1
carbon-14				1
dissolved organic carbon (DOC)	4	1		
particulate organic carbon (POC)	4	1		
organic carbon (OC)			26	
total organic carbon (TOC)			5	
carotenoids				1
cerium			1	
cesium			1	
cesium-137	1			
chlorine (as chloride ion)	1			
chlorophyll a	30	13	2	

TABLE I (continued)

A SUMMARY OF CHEMICAL DATA TYPES INCLUDED IN THE DATA INVENTORY AND THEIR FREQUENCY OF OCCURRENCE FOR EACH SAMPLING MEDIUM

CHEMICAL CONSTITUENT	SEA WATER	SEA ICE	SEDIMENT	BIOTA
chlorophyll b	2			
chlorophyll c	2			
chromium	2		17	1
chromium III oxide			1	
cobalt			10	
copper	3		16	1
deuterium	6	2		
electromotive force (emf)			1	
ethylene,2,2-bis(p-chlorophenyl)-1,1-dichloro (i.e. p,p'-DDE)				1
europium			1	
gallium			1	
hexane extractable compounds (HEC)			1	1
hydrocarbon (HC)			1	1
hydrogen			1	1
hydrogen carbonate (bicarbonate)	7			
hydroxide			1	
iron	1		18	1
iron III oxide			1	
lanthanum			2	
lead	1		6	1
lead-210	1		1	
lithium			7	
magnesium	5		8	
magnesium oxide			2	
manganese	4		18	
manganese oxide			2	
mercury	2		4	2
molybdenum			1	
naphthacene			1	
naphthalene			1	
neodymium			1	

TABLE I (continued)

A SUMMARY OF CHEMICAL DATA TYPES INCLUDED IN THE DATA INVENTORY AND THEIR FREQUENCY OF OCCURRENCE FOR EACH SAMPLING MEDIUM

CHEMICAL CONSTITUENT	SEA WATER	SEA ICE	SEDIMENT	BIOTA
nickel			17	
niobium			1	
nitrogen			3	
ammonia	35	10	3	
dissolved organic nitrogen (DON)	8			
nitrate	57	12	3	
nitrite	37	10	1	
particulate nitrogen (PN)	3	1		
total dissolved nitrogen (TDN)	3			
total Kjeldahl nitrogen (TKN)			1	
total organic nitrogen (TON)			1	
non-saponifiable hydrocarbon			1	
oxygen				
dissolved	54			
$^{18}O/16O$ isotope ratio ($\delta 18O$)	4		1	
perylene			1	
pH	15	3	2	
phaeopigments	8	2	1	
phenanthrene			1	
phosphorus	2	2	4	
dissolved inorganic phosphorus (DIP)	1			
dissolved organic phosphorus (DOP)	3			
phosphate	64	12	3	
phosphorus pentoxide			1	
total organic phosphorus (TOP)	1			
plutonium-239 + plutonium-241	1			
polychlorinated biphenyls (PCBs)				1
potssium	8		7	
potassium oxide			1	
protactinium-231			1	
rubidium			4	
saturated hydrocarbons			1	
scandium			2	
selenium	1		1	
silicon		1	2	
silica			2	
silicate	55	11	1	
$Si(OH)_4$	1			

TABLE I (continued)

A SUMMARY OF CHEMICAL DATA TYPES INCLUDED IN THE DATA INVENTORY AND THEIR FREQUENCY OF OCCURRENCE FOR EACH SAMPLING MEDIUM

CHEMICAL CONSTITUENT	SEA WATER	SEA ICE	SEDIMENT	BIOTA
sodium	7		8	
sodium oxide			1	
strontium			1	
strontium-90	2			
sulphur			1	
sulphate	5			
sulphite			1	
suspended particulate material	12	2		
tannin			1	
tantalum			1	
terbium			1	
thorium			2	
thorium-230			2	
thorium-232			2	
titanium			2	
titanium IV oxide			1	
total residue	3			
tritium	5	2		
uranium			2	
uranium-238			1	
unsaturated hydrocarbon (USHC)			1	
vanadium			15	
ytterbium			1	
yttrium			1	
zinc	5		15	1
zinc oxide			1	
zirconium			1	

3. OUTLINE OF DATA INVENTORY ORGANIZATION

3.1 Outline of Table 1 Organization

The data are organized into a chronological series of data sets beginning with the year 1926. No chemical data collected before 1926 could be found. Each data set comprises sampling or chemical measurements taken during a single cruise, or during a sampling excurison usually by a single agency. It is assumed, then, that data within a given data set have been collected uniformly and should be internally consistent insofar as sampling methodology is concerned.

Each data set has been assigned an identification number of the form yy-nnnn, where yy = last 2 digits of the year in which data were collected and nnnn = order of identification for that particular data set for that year. The data set number is an unique identifier which applies throughout this series of inventories; for example, any data set identified as 72-0009 is the same no matter where the reference to it is made. In certain cases, data may have been collected over a period of months or years by a common study team with minor or major differences occurring in the types of data collected at each sampling period. When this occurred, letters were used as a suffix to the data set number to distinguish the various sample collections. For example, data set 70-0021 is divided into three parts in the inventory - 70-0021A, 70-0021B and 70-0021C. While there is insufficient reason to regard the three as separate data sets, the subdivision is made to emphasize that different parameters were sampled during the various sampling periods. Gaps may appear in the sequence of data set numbers in this inventory for a particular year, because each data set will not appear in every discipline and geographical area.

3.2 Description of Table 1 Headings

Table 1 provides general details of sampling excursions and includes:

(1) identification of the specific region within the study area where sampling was conducted;

(2) the period of time during which the measurements were made;

(3) the ship or agency which collected the data;

(4) a listing of the chemical quantities measured or sampled during the collection period, with those quantities for which data are published and available for inclusion in this inventory in bold type. All entries are not in bold type because:

(a) all samples collected on original cruises may not have been analysed;

(b) samples may have been analysed but results may not be available in the public domain or may be untraceable;

(c) samples may be lost or destroyed.

(5) concurrent physical and biological measurements or samples.

4. REFERENCES

IOS (Institute of Ocean Sciences). 1985. The Arctic Data Compilation and Appraisal Program: Its background and status. 32 pp.

Thomas, D.J., R.W. Macdonald and A.G. Francis. 1986. West Coast Data Inventory and Appraisal. Volume 3. Dixon Entrance, Hecate Strait, Queen Charlotte Sound and adjoining B.C. Coastal Waters: Chemical Oceanography, 1937 through 1984. Can. Data Rep. Hydrogr. Ocean Sci. 37: (Volume 3, Part 1, 278 pp., Part 2, 248 pp.)

5. DATA INVENTORY TABLE 1.

NOTE: Entries appearing in column 5 in bold type indicate those chemical quantities reported in the references. Entries in regular type refer to quantities reported to have been sampled but for which no data were provided by original authors. Abbreviations used in Table 1 are listed at the beginning of the Table.

LIST OF ABBREVIATIONS USED IN TABLE I

ADP	- adenosine diphosphate
AIDJEX	- Arctic Ice Dynamics Joint Experiment
Al	- aluminum (AW = 26.98)
AlHC	- aliphatic hydrocarbons
Alk	- alkalinity
Am	- americium (AW = 243)
AMP	- adenosine-5-monophosphate
ANTH	- anthracene
ArHC	- aromatic hydrocarbons
As	- arsenic (AW = 74.91)
ATP	- adenosine triphosphate
AW	- atomic weight
B	- boron (AW = 10.81)
Ba	- barium (AW = 137.36)
Be	- beryllium (AW = 9.01)
BEC	- benzene extractable compounds
Br	- bromine (AW = 79.92)
BT	- bathythermograph
C	- carbon (AW = 12.01) or conductivity when located in "CONCURRENT PHYSICAL MEASUREMENTS" column
^{13}C	- carbon (AW = 13.00)
Ca	- calcium (AW = 40.08)
Cd	- cadmium (AW = 112.40)
Ce	- cerium (AW = 140.13)
C_2H_4	- ethene
C_3H_6	- propene
Chl.a	- chlorophyll a
Chl.b	- chlorophyll b
Chl.c	- chlorophyll c
Cl	- chlorine (AW = 35.45)
Co	- cobalt (AW = 58.94)

CO_3	- carbonate
Cr	- chromium (AW = 52.00)
Cs	- cesium (AW = 132.91)
Cu	- copper (AW = 63.55)
p,p'-DDT	- 1,1-bis(p-chlorophenyl)-2,2,2-trichloroethane (FW = 354.5)
DOC	- dissolved organic carbon
DON	- dissolved organic nitrogen
emf	- electromotive potential
Eu	- europium (AW = 152.0)
Fe	- iron (AW = 55.85)
Ga	- gallium (AW = 69.72)
^1H	- hydrogen (AW = 1.00)
^2H	- deuterium (AW = 2.00)
^3H	- tritium (AW = 3.00)
HC	- hydrocarbons
HCO_3	- bicarbonate
HEC	- hexane extractable compounds
Hg	- mercury (AW = 200.59)
K	- potassium (AW = 39.10)
La	- lanthanum (AW = 138.92)
Li	- lithium (AW = 6.94)
LOREX	- Lamonosov Ridge Experiment
Mg	- magnesium (AW = 24.31)
Mn	- manganese (AW = 54.94)
Mo	- molybdenum (AW = 95.95)

N	- nitrogen (AW = 14.01)
Na	- sodium (AW = 22.99)
NAPH	- naphthalene
NAPHC	- naphthacene
Nb	- niobium (AW = 92.91)
Nd	- neodymium (AW = 144.27)
NH_3	- ammonia
Ni	- nickel (AW = 58.71)
NO_2	- nitrite nitrogen
NO_3	- nitrate nitrogen
O_2	- dissolved oxygen
OC	- organic carbon
OCSEAP	- (Alaska) Outer Continental Shelf Environmental Assessment Program
P	- phosphorus (AW = 242)
Pa	- protactinium (AW = 231.00)
Pb	- lead (AW = 207.19)
^{210}Pb	- lead (AW = 210)
PCB	- polychlorinated biphenyls
PERY	- perylene
pH	- -log (H+)
PHAEO	- phaeopigments
PHEN	- phenanthrene
PERY	- perylene
PN	- particulate nitrogen
PO_4	- total phosphate
POC	- particulate organic carbon
PON	- particulate organic nitrogen
POP	- particulate organic phosphorus
Pu	- plutonium (AW = 242)
Rb	- Rubidium (AW = 85.47)

S	- sulphur (AW = 32.06) or salinity when located in "**CONCURRENT PHYSICAL MEASURMENTS**" column
Sb	- antimony (AW = 121.76)
Sc	- scandium (AW = 44.96)
Se	- selenium (AW = 78.96)
SiO_2	- silica
SiO_3	- silicate-silicon
Sm	- samarium (AW = 150.35)
SO_4	- sulphate
SPM	- suspended particulate matter
Sr	- strontium (AW = 87.62)
^{90}Sr	- strontium (AW = 90)
S/V	- speed of sound in water
T	- temperature
Ta	- tantalum (AW = 180.95)
tan	- tannin
Tb	- terbium (AW = 158.93)
TDN	- total dissolved nitrogen
Th	- thorium (AW = 232.05)
Ti	- titanium (AW = 47.90)
TKN	- total Kjeldahl nitrogen
TLC	- thin layer chromatography
TOC	- total organic carbon
TON	- total organic nitrogen
TR	- total residue
U	- uranium (AW = 238.03)
USHC	- unsaturated hydrocarbon
V	- vandium (AW = 50.94)
Y	- yttrium (AW = 88.92)
Yb	- ytterbium (AW = 173.04)
Zn	- zinc (AW = 65.37)
Zr	- zirconium (AW = 91.22)

DATA SET I.D.	COLLECTING AGENCY, SHIP	DATES OF MEASURE-MENT	AREA	CHEMICAL QUANTITIES MEASURED OR SAMPLED	CONCURRENT PHYSICAL MEASUREMENTS	CONCURRENT BIOLOGICAL MEASUREMENTS	REMARKS
26-0001	HUDSON'S BAY COMPANY (for P.D. Trask)	1926 - 1931	Alaskan Shelf	Bottom Sediment: $CaCO_3$, TKN			collection date uncertain but within range given
37-0005	Northland	Aug. 15-24	Northeast Chukchi Sea	Water Column: O_2, PO_4, SiO_3	Water Column: T, S, S/V		
38-0003	Northland	Aug. 3-5	Northeast Chukchi Sea	Water Column: O_2, NO_2, PO_4	Water Column: T, S, S/V		
41-0001	U.S.S.R. N-169 Aircraft (Soviet Union)	April 3-28	Mendeleyev Ridge	Water Column: O_2	Water Column: T, S		Libin-Cherevichny Expedition
49-0005	Aircraft Landings (Soviet Union)	April 27 - May 13	Canada Basin, Mendeleyev Ridge, Alpha Ridge, Makarov Basin	Water Column: O_2, Br, $CaCO_3$, HCO_3, NO_3, PO_4, SiO_3, pH, Ca, K, Mg, Na, TR	Water Column: T, S		
50-0001	U.S.S. Burton Island	Aug. 5-30	Alaskan Shelf and Slope	Water Column: O_2, PO_4 Bottom Sediment: TOC	Water Column: T, S, currents, BT Bottom Sediment: particle grain size distribution, mineralogy	Microbes: bacterial actitity Plankton: species composition and numerical abundance Other: Secchi depth	Beaufort Sea Expedition composition and

DATA SET I.D.	COLLECTING AGENCY, SHIP	DATES OF MEASUREMENT	AREA	CHEMICAL QUANTITIES MEASURED OR SAMPLED	CONCURRENT PHYSICAL MEASUREMENTS	CONCURRENT BIOLOGICAL MEASUREMENTS	REMARKS
50-0007	Ice Station NP-2 (Soviet Union)	April 23/50 - April 2/51	Canada Basin, Chukchi Plateau	Water Column: O_2, Br, $CaCO_3$, HCO_3, NO_2, NO_3, PO_4, SiO_3, SO_4, pH, Ca, K, Mg, Mn, Na, TR Bottom Sediment: Al_2O_3, $CaCO_3$, CO_3, OC, CaO, Fe_2O_3, MgO, MnO, OH, P_2O_5, SiO_2, SO_3	Water Column: T, S, Currents Bottom Sediment: mineralogy	Zooplankton: species composition and numerical abundance	
50-0008	High Latitude Aerial Expedition (Soviet Union)	March 31 - April 28	Canada Basin, Makarov Basin	Water Column: O_2, Br, $CaCO_3$, HCO_3, NO_3, PO_4, SiO_3, pH, Ca, K, Mg, Na, TR	Water Column: T, S		
51-0001	U.S.S. Burton Island	Aug. 8 - Sept. 21	Alaskan Shelf and Slope	Water Column: O_2 Bottom Sediment: TOC, pH, emf	Water Column: T, S, currents, BT Bottom Sediment: particle grain size distribution, mineralogy	Zooplankton: species composition and numerical abundance Other: Secchi depth	Beaufort Sea Expedition
52-0002	U.S.S. Burton Island	Sept. 2-14	Alaskan Shelf and Slope	Water Column: O_2, PO_4, SiO_3	Water Column: T, S, S/V, BT, currents		Beaufort Sea Expedition

DATA SET I.D.	COLLECTING AGENCY, SHIP	DATES OF MEASUREMENT	AREA	CHEMICAL QUANTITIES MEASURED OR SAMPLED	CONCURRENT PHYSICAL MEASUREMENTS	CONCURRENT BIOLOGICAL MEASUREMENTS	REMARKS
52-0010	Ice Island T-3	Nov. 29/52 - Aug. 1/855	Alpha Ridge, Lomonosov Ridge	Water Column: ^2H, ^3H	Water Column: T, S	Zoobenthos: species composition and numerical abundance	
				Ice Cores: ^3H	Ice Cores: T, sediment inclusions		
54-0001	H.M.C.S. Labrador	Sept. (?)	Northwind Ridge, Alaskan Shelf	Water Column: ^2H, ^3H	Water Column: T, S		
54-0002	U.S.S. Burton Island	May 12 - Sept. 14	Alaskan Shelf	Water Column: O_2	Water Column: T, S		
54-0014	Ice Station NP-3 (Soviet Union)	April 9/54 - April 20/55	Makarov Basin, Lomonosov Ridge	Water Column: O_2, Br, $CaCO_3$, HCO_3, NO_3, PO_4, SiO_3, SO_4, pH, Ca, K, Mg, Na	Water Column: T, S		
54-0015	Ice Station NP-4 (Soviet Union)	April 8/54, April 20/57	Mendeleyev Ridge	Water Column: O_2, Br, $CaCO_3$, HCO_3, NO_3, PO_4, SiO_3, SO_4, pH, Ca, K, Mg, Na	Water Column: T, S		

DATA SET I.D.	COLLECTING AGENCY, SHIP	DATES OF MEASUREMENT	AREA	CHEMICAL QUANTITIES MEASURED OR SAMPLED	CONCURRENT PHYSICAL MEASUREMENTS	CONCURRENT BIOLOGICAL MEASUREMENTS	REMARKS
57-0011	Drift Station Alpha	April, 1957 - Nov., 1958	Mendeleyev Ridge	Water Column: O_2, NO_2, NO_3, PO_4, P, chl. a, ^2H Ice Cores: ^2H	Water Column: T, S	Phytoplankton: primary productivity	
57-0014	Ice Island T-3 (IGY Station Bravo)	April 19/57 - May 15/58	Canada Basin	Water Column: NO_3, PO_4, P, chl. a, ^2H Ice Cores: NO_3, ^2H	Ice Cores: S	Plankton: species composition and numerical abundance, primary productivity	PROJECT ICESKATE
58-0011	Ice Island T-3 (IGY Station Bravo	May 26 - Sept. 28	Canada Basin, Continental Slope off Queen Elizabeth Islands	Water Column: O_2, PO_4	Water Column: T, S, BT		
58-0013	U.S.S. Skate (submarine)	Summer	Lomonosov Ridge, Amundsen Basin	Water Column: ^2H	Water Column: S		

DATA SET I.D.	COLLECTING AGENCY, SHIP	DATES OF MEASUREMENT	AREA	CHEMICAL QUANTITIES MEASURED OR SAMPLED	CONCURRENT PHYSICAL MEASUREMENTS	CONCURRENT BIOLOGICAL MEASUREMENTS	REMARKS
59-0001	HOKKAIDO UNIVERSITY Sapporo, Japan Ice Island T-3	Nov. 19/59 - July 20/60	Alaskan Slope	Water Column: O_2, SiO_3	Water Column: T, S, S/V, BT		
59-0016	Drifting Station Charlie	April 13/59 - Jan. 7/60	Chukchi Plateau	Water Column: O_2, PO_4, SiO_3	Water Column: T, S, S/V, bathymetry Bottom Sediment: Particle size, Mineralogy		
60-0007	Polar Continental Shelf Project (Aircraft)	April 18 - June 3	Continental Shelf and Slope off Queen Elizabeth Islands	Water Column: O_2	Water Column: T, S, S/V		
60-0013	U.S.C.G.C. Staten Island	Dec. 29	Canada Basin	Water Column: O_2	Water Column: T, S, S/V		
60-0020	U.S.C.G.C. Northwind	Aug. 26	Alaskan Slope off Barrow	Water Column: ^{90}Sr			

DATA SET I.D.	COLLECTING AGENCY, SHIP	DATES OF MEASUREMENT	AREA	CHEMICAL QUANTITIES MEASURED OR SAMPLED	CONCURRENT PHYSICAL MEASUREMENTS	CONCURRENT BIOLOGICAL MEASUREMENTS	REMARKS
62-0021	U.S.C.G.C. Northwind	Oct. 5-26	Alaskan Shelf and Slope	Water Column: O_2, chl. a, chl. b, chl. c	Water Column: T, S, bathymetry, surface irradiation	Plankton: species composition and numerical abundance	
						Benthos: species composition and numerical abundance	
						Marine Mammals: species composition and numerical abundance	
						Other: Secchi depth	
				Bottom Sediment: OC, CO_3			sediment carbon values given as range and mean and include samples from outside area
				Biota: animal carotenoids, plant carotenoids			

DATA SET I.D.	COLLECTING AGENCY, SHIP	DATES OF MEASUREMENT	AREA	CHEMICAL QUANTITIES MEASURED OR SAMPLED	CONCURRENT PHYSICAL MEASUREMENTS	CONCURRENT BIOLOGICAL MEASUREMENTS	REMARKS
63-0019	U.S. GEOLOGICAL SURVEY Ice Island T-3	1963 - 1973	Alpha Ridge, Canada Basin, Chukchi Abyssal Plain, Mendeleyev Ridge, Mendeleyev Abyssal Plain	Bottom Sediment: $CaCO_3$, CO_3, OC, Fe, Mn, ^{10}Be, ^{230}Th, ^{232}Th	Bottom Sediment: particle grain size distribution, mineralogy, paleoecology		
63-0020	Ice Island T-3	1963	Canada Basin	Bottom Sediment: $CaCO_3$, Th, U, ^{231}Pa, ^{230}Th, ^{232}Th, ^{238}U	Bottom Sediment: ^{14}C dating		
64-0008	DEFENCE RESEARCH BOARD OF CANADA AND McGILL UNIVERSITY	May 8 - Aug. 25	off Nansen Sound	Water Column: O_2	Water Column: T, S, S/V, BT Ice: thickness, snow cover		

DATA SET I.D.	COLLECTING AGENCY, SHIP	DATES OF MEASUREMENT	AREA	CHEMICAL QUANTITIES MEASURED OR SAMPLED	CONCURRENT PHYSICAL MEASUREMENTS	CONCURRENT BIOLOGICAL MEASUREMENTS	REMARKS
64-0013	UNIVERSITY OF WASHINGTON AND HOKKAIDO UNIVERSITY Ice Station Arris II	Feb. 4 - Dec. 31	Lomonosov Ridge, Amundsen Basin	Water Column: O_2, PO_4, SiO_3	Water Column: T, S		
64-0017	MARINE SCIENCES CENTRE McGill University Ice Island T-3	June 23 - Sept. 8	Canada Basin	Water Column: O_2, ^2H	Water Column: T, S	Plankton: species composion and numerical abundance	
64-0024	C.C.G.S. Camsell (and on foot on ice)	July 2 - Aug. 3	Chukchi Sea near Pt. Barrow	Water Column: PO_4, SiO_3, chl. a Ice Cores: PO_4, SiO_3, chl. a	Water Column: S	Phytoplankton: species composition	
65-0013	UNIVERSITY OF WASHINGTON Ice Island T-3	June 6/65 Jan. 12/66	Canada Basin	Water Column: O_2	Water Column: T, S, currents		

DATA SET I.D.	COLLECTING AGENCY, SHIP	DATES OF MEASUREMENT	AREA	CHEMICAL QUANTITIES MEASURED OR SAMPLED	CONCURRENT PHYSICAL MEASUREMENTS	CONCURRENT BIOLOGICAL MEASUREMENTS	REMARKS
65-0023	LAMONT-DOHERTY GEOLOGICAL OBSERVATORY, Columbia University, Palisades, N.Y. Ice Island T-3	Nov. 1965 - July 1966	Canada Basin	Bottom Sediment: CO_3, OC, Ca, Co, Cr, Cu, Fe, K, Li, Mg, Mn, Na, Ni, Rb, Zn	Bottom Sediment: mineralogy		
66-0015	UNIVERSITY OF WASHINGTON Ice Island T-3	Jan. 15/66 - March 25/67	Canada Basin, Northwind Abyssal Plain, Chukchi Abyssal Plain	Water Column: O_2	Water Column: T, S		
66-0018	LAMONT-DOHERTY GEOLOGICAL OBSERVATORY Columbia University, Palisades, N.Y. Ice Island T-3	Sept. 13	Northwind Abyssal Plain	Water Column: CO_2, ^{18}O Bottom Sediment: ^{13}C, ^{18}O	Water Column: T, S		data apply to water sample, may vary slightly for sediment
66-0019	Ice Station NP-15 (Soviet Union)	April 15/66 - March 19/68	Canada Basin, Mendeleyev/ Alpha Ridge	Water Column: ^{18}O	Water Column: T, S		

DATA SET I.D.	COLLECTING AGENCY, SHIP	DATES OF MEASUREMENT	AREA	CHEMICAL QUANTITIES MEASURED OR SAMPLED	CONCURRENT PHYSICAL MEASUREMENTS	CONCURRENT BIOLOGICAL MEASUREMENTS	REMARKS
67-0010	MARINE SCIENCES CENTRE McGill University and DEFENCE RESEARCH BOARD OF CANADA	May (?) - July (?)	Disraeli Fjord	Water Column: ^3H	Water Column: T, S, BT, currents, tides		
67-0019	Ice Island T-3	June 9 - Sept. 4	Mendeleyev Abyssal Plain	Water Column: O_2	Water Column: T, S		
67-0020	Ice Island T-3	Nov. 19-20	Canada Basin	Water Column: O_2	Water Column: T, S, S/V		
67-0021	MARINE SCIENCES CENTRE McGill University Ice Island T-3	April 25 - May 7	Canada Basin, Mendeleyev Abyssal Plain	Water column: O_2, PO_4, SiO_3	Water Column: sound scattering	Plankton: species composition Fish: species composition	

DATA SET I.D.	COLLECTING AGENCY, SHIP	DATES OF MEASUREMENT	AREA	CHEMICAL QUANTITIES MEASURED OR SAMPLED	CONCURRENT PHYSICAL MEASUREMENTS	CONCURRENT BIOLOGICAL MEASUREMENTS	REMARKS
67-0024	UNIVERSITY OF WASHINGTON Dept. of Atmospheric Science Ice Island T-3	Jan. 8-21	Mendeleyev Ridge	Water Column: CO_2 Atmosphere: CO_2	Water Column: T Atmosphere: T		
68-0017	INSTITUTE OF MARINE SCIENCE University of Alaska, U.S.C.G.C. Northwind	Aug. 10-22	Alaskan Shelf and Slope, Chukchi Slope	Water Column: O_2, NH_3, NO_2, NO_3, PO_4, SiO_3	Water Column: T, S, S/V		
68-0019	INSTITUTE OF MARINE SCIENCE University of Alaska Ice Island T-3	March 29 - April 6	Canada Basin	Water Column: O_2, DOC, POC, NO_2, NO_3, PO_4, SiO_3	Water Column: T, S, S/V	^{14}C, ^{15}N uptake	
68-0020	Ice Island T-3	June 23 - Sept. 8	Canada Basin, Mendeleyev Ridge, Alpha Ridge	Water Column: O_2	Water Column: T, S, S/V		

DATA SET I.D.	COLLECTING AGENCY, SHIP	DATES OF MEASUREMENT	AREA	CHEMICAL QUANTITIES MEASURED OR SAMPLED	CONCURRENT PHYSICAL MEASUREMENTS	CONCURRENT BIOLOGICAL MEASUREMENTS	REMARKS
68-0021	Ice Station NP-16 Soviet Union	April, 1968 - March, 1972	Mendeleyev/ Alpha Ridge	Water Column: O_2, SiO_3, pH, ^{18}O	Water Column: T, S Ice: thickness, snow cover		
68-0023	INSTITUTE OF MARINE SCIENCE University of Alaska U.S.C.G.C. Northwind	July 28 - Aug. 2	Chukchi Sea	Water Column: O_2, DOC, POC, NH_3, NO_2, NO_3, PO_4, SiO_3, SPM	Water Column: T, S, W/V		
68-0028	INSTITUTE OF MARINE SCIENCE University of Alaska Ice Island T-3	January - April	Canada Basin	Water Column: Cu, Mn, Zn			no station locations given
68-0029	Ice Island T-3	April	Canada Basin	Bottom Sediment: Mn Interstitial Water: CO_2, pH, Mn, SO_4	Bottom Sediment: mineralogy Interstitial Water: S (as chlorinity)		
68-0030	U.S.C.G.C. Staten Island	Aug.	Alaskan Shelf and Slope	Bottom Sediment: OC	Bottom Sediment: particle size size distribution		

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68-0031	INSTITUTE OF MARINE SCIENCES University of Alaska	Aug. 1968 - Dec. 1969	Chukchi Sea near Barrow	Ice Cores: pH, alk., chl. a	Ice Cores: S	Phytoplankton: species composition and numerical abundance, ^{14}C uptake	
69-0001	U.S.C.G.C. Staten Island	July 22 - Aug. 21	Alaskan Shelf and Slope, Canada Basin	Water Column: O_2, NH_3, NO_2 NO_3, PN, PO_4, SiO_3, Zn, SPM	Water Column: T, S, S/V		
				Bottom Sediment: C, CO_3, OC, Ca, Co, Cr, Cu, Fe, K, Li, Mg, Mn, Na, Ni, Rb, U, V, Zn	Bottom Sediment: particle grain size distribution		
69-0022A	INSTITUTE OF MARINE SCIENCE University of Alaska Cessna-180 aircraft	Sept. 4	Colville River Delta, Harrison Bay	Water Column: NH_3, NO_2, NO_3, PO_4, SiO_3, Zn	Water Column: S		

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69-0022B	INSTITUTE OF MARINE SCIENCE University of Alaska Cessna-180 aircraft	March 10	Harrison Bay, Colville River Delta, Alaskan Shelf	Water Column: NH_3, NO_2, NO_3, PO_4, SiO_3	Water Column: S Ice: thickness		
69-0024	INSTITUTE OF MARINE SCIENCE University of Alaska Ice Island T-3	April 29 - May 8	Alpha Ridge	Water Column: O_2, DOC, POC, NO_2, NO_3, PN, PO_4, SiO_3	Water Column: T, S, S/V		
69-0025	Ice Island T-3	June 21 - Sept. 26	Alpha Ridge	Water Column: O_2	Water Column: T, S, S/V		
70-0021A	INSTITUTE OF MARINE SCIENCE University of Alaska	May 23-30	Simpson Lagoon, Harrison Bay, Colville River Delta, Alaskan Shelf	Water Column: O_2, NH_3, NO_2, NO_3, PO_4, SiO_3	Water Column: T, S Ice: thickness		

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70-0021B	INSTITUTE OF MARINE SCIENCE University of Alaska	Aug. 8 - Sept. 1	Simpson Lagoon, Harrison Bay, Colville River Delta, Alaskan Shelf	Water Column: O_2, NH_3, NO_2, NO_3, NH_3, DON, PO_4, DOP, SiO_3, pH, alkCO_3, chl. a, chl. b, chl. c, SPM	Water Column: T, S, currents, particle grain size distribution, mineralogy (bottom sediment)	Phytoplankton: primary production, species composition and numerical abundance Benthos: species composition and numerical abundance Fish: species composition and numerical abundance	
70-0021C	INSTITUTE OF MARINE SCIENCE University of Alaska	Dec. 3-5	Simpson Lagoon, Harrison Bay	Water Column: NH_3, NO_2, NO_3, DON, PO_4, DOP, SiO_3 Ice Cores: NH_3, NO_2, NO_3, DON, PO_4, DOP, SiO_3	Water Column: S Ice Cores: S, ice thickness		
70-0026	Ice Island T-3	Jan. 17 - May 10	Alpha Ridge	Water Column: O_2	Water Column: T, S, S/V		
70-0027	Ice Island T-3	June 7 - Dec. 2	Alpha Ridge	Water Column: O_2, NO_3, PO_4, SiO_3	Water Column: T, S, S/V		

DATA SET I.D.	COLLECTING AGENCY, SHIP	DATES OF MEASUREMENT	AREA	CHEMICAL QUANTITIES MEASURED OR SAMPLED	CONCURRENT PHYSICAL MEASUREMENTS	CONCURRENT BIOLOGICAL MEASUREMENTS	REMARKS
70-0036A	INSTITUTE OF MARINE SCIENCE University of Alaska	May 6 - Sept. 25	Chukchi Sea near Barrow	Water Column: NH_3, NO_2, NO_3, PO_4, SiO_3, chl. a Ice Cores: NH_3, NO_2, NO_3, PO_4, SiO_3	Water Column: T, S Ice: snow cover	Phytoplankton: species composition Other: Sechi depth	
70-0036B	INSTITUTE OF MARINE SCIENCE University Alaska	Nov. 21-30	Chukchi Sea near Barrow	Water Column: NH_3, NO_2, NO_3, PO_4, SiO_3, chl. a Ice Cores: NH_3, NO_2, NO_3, PO_4, SiO_3, chl. a	Water Column: S Ice: snow cover Ice Cores: S Ice: thickness	Phytoplankton: primary productivity	
70-0037	U.S. GEOLOGICAL SURVEY Menlo Park California R.V. Natchik	Sept. 16-19	Alaskan Shelf and Slope	Bottom Sediment: CO_3, OC, Cu, Fe, Mn, Ni, V, Zn	Water Column: T, S Bottom Sediment: particle grain size distribution, mineralogy	Other: Secchi depth	PC-2
71-0013	DEFENCE RESEARCH ESTABLISHMENT Ottawa, Ontario Louis S. St. Laurent	Aug. 22	Lincoln Sea	Water Column: O_2	Water Column: T, S, S/V		

DATA SET I.D.	COLLECTING AGENCY, SHIP	DATES OF MEASUREMENT	AREA	CHEMICAL QUANTITIES MEASURED OR SAMPLED	CONCURRENT PHYSICAL MEASUREMENTS	CONCURRENT BIOLOGICAL MEASUREMENTS	REMARKS
71-0020	U.S.C.G.C. Glacier	Aug. 20 - Sept. 20	Alaskan Shelf and Slope	Water Column: O_2, NO_2, NO_3, PO_4, SiO_3, SPM Bottom Sediment: CO_3, OC, C, P, S, Al, As, B, Ba, Be, Ca, Ce, Co, Cr, Cu, Fe, Ga, Hg, K, La, Li, Mg, Mn, Mo, Na, Nb, Nd, Ni, Pb, Rb, Sc, Si, Sr, V, Y, Yb, Zn, Zr Bottom Sediment: (ferrimanganic encrustations) P, Al, B, Ba, Ca, Cr, Cu, Fe, K, Mg, Mn, Na, Sr, Zn Interstitial Water: PO_4, SiO_3, pH, Fe, Mn	Water Column: T, S, S/V, current, BT, light attenuation Ice: thickness Bottom Sediment: particle grain size distribution Interstitial Water: T	Benthos: species composition and numerical abundance Other: Secchi depth	WEBSEC-71

DATA SET I.D.	COLLECTING AGENCY, SHIP	DATES OF MEASUREMENT	AREA	CHEMICAL QUANTITIES MEASURED OR SAMPLED	CONCURRENT PHYSICAL MEASUREMENTS	CONCURRENT BIOLOGICAL MEASUREMENTS	REMARKS
71-0021	U.S. GEOLOGICAL SURVEY Menlo Park. California R/V Natchik and a Boston whaler boat	Aug. 25 - Sept. 20	Alaskan Shelf	Water Column: SPM Bottom Sediment: CO_3, OC, As, Ca, Co, Cr, Cu, Fe, Hg, K, Li, Mg, Mn, Na, Ni, Pb, Rb, V, Zn	Water Column: T, S, light attenuation Bottom Sediment: particle grain size distribution, mineralogy	Other: Secchi depth	WEBSEC-71
71-0022B	INSTITUTE OF MARINE SCIENCE, University of Alaska R/V Natchik and small boats	June 17 - Aug. 23	Harrison Bay, Simpson Lagoon, Alaskan Shelf, Colville River Delta	Water Column: O_2, NH_3, NO_2, NO_3, DON, PO_4, SiO_3, pH, alk, chl. a, phaeo. Bottom Sediment: $CaCO_3$, CO_3, OC, C	Water Column: T, S, currents	Phytoplankton: primary production ^{15}N uptake Plankton: species composition and numerical abundance Benthos: species composition and numerical abundance Fish: species composition and numerical abundance	
71-0025	INSTITUTE OF MARINE SCIENCE University of Alaska	May (?)	Simpson Lagoon	Water Column: NO_3, PO_4, SiO_3	Water Column: S		

DATA SET I.D.	COLLECTING AGENCY, SHIP	DATES OF MEASUREMENT	AREA	CHEMICAL QUANTITIES MEASURED OR SAMPLED	CONCURRENT PHYSICAL MEASUREMENTS	CONCURRENT BIOLOGICAL MEASUREMENTS	REMARKS
71-0026	INSTITUTE OF MARINE SCIENCE University of Alaska	April (?) - May (?)	Alaskan Shelf	Water Column: O_2, NH_3, NO_2, NO_3, DON, PO_4, SiO_3 Bottom Sediment: $CaCO_3$, CO_3, OC, C	Water Column: S		
71-0031	Ice Island T-3	June 5 - Sept. 25	Alpha Ridge	Water Column: O_2, NO_3, PO_4, SiO_3	Water Column: T, S, S/V		
71-0032	Ice Island T-3	Nov. 9-30	Alpha Ridge	Water Column: O_2	Water Column: T, S, S/V		
71-0035	INSTITUTE OF MARINE SCIENCE University of Alaska	Mar. 27, May 10, July 24-29, Aug. 15-19/71, Feb. 2, May 18, 25, Aug. 11-15/72	Prudhoe Bay	Water Column: NH_3, NO_2, NO_3, PO_4, SiO_3, SiO_3, chl. a Ice Cores: NH_3, NO_2, NO_3, PO_4, SiO_3, chl. a	Water Column: T, S Ice Cores: S	Phytoplankton: primary productivity Zooplankton: species composition and numerical abundance Other: Secchi depth	

DATA SET I.D.	COLLECTING AGENCY, SHIP	DATES OF MEASUREMENT	AREA	CHEMICAL QUANTITIES MEASURED OR SAMPLED	CONCURRENT PHYSICAL MEASUREMENTS	CONCURRENT BIOLOGICAL MEASUREMENTS	REMARKS
71-0041	CANADIAN WILDLIFE SERVICE	April (?)	north of Ellesmere Island	Biota (Polar Bear) PCB, p,p'-DDE			
71-0042	INSTITUTE OF MARINE SCIENCE University of Alaska	May 13 - Sept. 9	Chukchi Sea near Barrow	Water Column: NH_3, NO_2, NO_3, PO_4, SiO_3, chl. a Ice Cores: NH_3, NO_2, NO_3, PO_4, SiO_3, chl. a	Water Column: T, S, Ice Cores:: snow cover, thickness	Plankton: primary productivity, nutrient uptake Benthos: species composition and numerical abundance Other: Secchi depth	
71-0043	INSTITUTE OF MARINE SCIENCE University of Alaska	June 2-4	Harrison Bay, Smith Bay, Dease Inlet, Peard Bay, Prudhoe Bay	Water Column: NO_3, PO_4, SiO_3, chl. a Ice Cores: NO_2, NO_3, PO_4, SiO_3, chl. a	Water Column: T, S Ice Cores: S, snow cover, thickness	Plankton: primary production	

DATA SET I.D.	COLLECTING AGENCY, SHIP	DATES OF MEASUREMENT	AREA	CHEMICAL QUANTITIES MEASURED OR SAMPLED	CONCURRENT PHYSICAL MEASUREMENTS	CONCURRENT BIOLOGICAL MEASUREMENTS	REMARKS
71-0044	INSTITUTE OF MARINE SCIENCE University of Alaska	March 13/71 - March 27/72	Chukchi Sea near Barrow	Water Column: NH_3, NO_2, NO_3, PO_4, SiO_3, chl. a Ice Cores: NH_3, NO_2, NO_3, PO_4, SiO_3, chl. a	Water Column: T, S Ice: snow cover Ice Cores: S, thickness	Zooplankton: primary production	
71-0045	INSTITUTE OF MARINE SCIENCE University of Alaska	April 17-28	Colville River Delta	Water Column: O_2	Water Column: S		
72-0027	U.S.C.G.C. Glacier	Aug. 2 - Sept. 12	Alaskan Shelf and Slope	Water Column: O_2, NO_2, NO_3, PO_4, SiO_3, SPM Bottom Sediment: CO_3, OC, As, Cu, Fe, Hg, K, Li, Mg, Mn, Na, Ni, Pb, Zn, ^{13}C Biota: (zooplankton) Hg	Water Column: T, S, S/V, currents, light attenuation	Zooplankton: species composition and numerical abundance Benthos: species composition and numerical abundance Other: Secchi depth	WEBSEC-72

DATA SET I.D.	COLLECTING AGENCY, SHIP	DATES OF MEASUREMENT	AREA	CHEMICAL QUANTITIES MEASURED OR SAMPLED	CONCURRENT PHYSICAL MEASUREMENTS	CONCURRENT BIOLOGICAL MEASUREMENTS	REMARKS
72-0028	U.S. GEOLOGICAL SURVEY Menlo Park, California R/V Natchik and a Boston whaler	Aug. 2 - Sept. 12	Alaskan Shelf and Slope	Water Column: SPM Bottom Sediment: CO_3, OC, As, Co, Cr, Cu, Fe, Hg, K, Li, Mg, Mn, Na, Ni, Pb, Rb, V, Zn	Water Column: T, S, light attentuation Bottom Sediment: particle grain size distribution, mineralogy	Other: Secchi depth	WEBSEC-72
72-0029B	INSTITUTE OF MARINE SCIENCE University of Alaska	July 28 - Nov. 15	Simpson Lagoon, Colville River Delta, Alaskan Shelf	Water Column: O_2, C, NH_3, NO_3, DON, TON, PO_4, SiO_3, pH, alk	Water Column: S	Phytoplankton: primary productivity, nutrient uptake, species composition and numerical abundance	
72-0032	U.S. GEOLOGICAL SURVEY Menlo Park, California) R/V Loon	May 22 - Sept. 5	Alaskan Shelf and Slope	Water Column: SPM Bottom Sediment: CO_3, OC, Cr, Cu, Fe, Mn, Ni, V, Zn	Water Column: T, S Bottom Sediment: particle grain size distribution		data not published

DATA SET I.D.	COLLECTING AGENCY, SHIP	DATES OF MEASUREMENT	AREA	CHEMICAL QUANTITIES MEASURED OR SAMPLED	CONCURRENT PHYSICAL MEASUREMENTS	CONCURRENT BIOLOGICAL MEASUREMENTS	REMARKS
72-0035A	LAMONT DOHERTY GEOLOGICAL OBSERVATORY Columbia University, Palisades, N.Y. (for AIDJEX)	March 15 - April 26	Canada Basin	Water Column: nutrients	Water Column: T, S, currents		nutrient samples collected but not analysed
72-0035F	INSTITUTE OF MARINE SCIENCE University of Alaska (for AIDJEX)	April 22-24	Canada Basin	Water Column: NH_3, NO_2, NO_3, PO_4, SiO_3, chl. a Ice Cores: chl. a	Water Column: S	Phytoplankton: primary productivity	
72-0040	U.S.C.G.C. Staten Island	July 4-16	Alaskan Shelf and Slope, Chukchi Sea	Water Column: O_2, NO_2, NO_3, PO_4, SiO_3	Water Column: T, S, S/V, BT, light attenuation		WEBSEC-72
72-0041	U.S.S. Burton Island	July 28 - Aug. 19	Alaskan Shelf	Water Column: O_2	Water Column: T, S		MIZPAC-72

DATA SET I.D.	COLLECTING AGENCY, SHIP	DATES OF MEASUREMENT	AREA	CHEMICAL QUANTITIES MEASURED OR SAMPLED	CONCURRENT PHYSICAL MEASUREMENTS	CONCURRENT BIOLOGICAL MEASUREMENTS	REMARKS
72-0045	INSTITUTE OF MARINE SCIENCE University of Alaska	Jan. 29 - June 9	Chukchi Sea near Barrow	Water Column: CO_2, NH_3, NO_2, NO_3, PO_4, SiO_3, pH, chl. a Ice Cores: CO_2, NH_3, NO_2, NO_3, PO_4, SiO_3, pH, chl. a Ice Interstitial Water: CO_2, NH_3, $NO_2 + NO_3$, PO_4, SiO_3, pH	Water Column: T, S Ice: snow cover Ice Cores: S, thickness Ice Interstitial: S	Other: Secchi depth Epontic Algae: primary productivity	
72-0046	INSTITUTE OF MARINE SCIENCE University of Alaska Ice Island T-3	March 31 - April 10	Alpha Ridge	Water Column: chl. a Ice Cores: chl. a			no station locations given

DATA SET I.D.	COLLECTING AGENCY, SHIP	DATES OF MEASUREMENT	AREA	CHEMICAL QUANTITIES MEASURED OR SAMPLED	CONCURRENT PHYSICAL MEASUREMENTS	CONCURRENT BIOLOGICAL MEASUREMENTS	REMARKS
72-0047	INSTITUTE OF MARINE SCIENCE University of Alaska	Feb. 1 - Aug. 29	Chukchi Sea near Barrow	Bottom Sediment: chl. a		Phytoplankton: primary productivity, species composition and numerical abundance Phytobenthos: primary productivity, species composition and numerical abundance Epontic Algae: productivity, species composition and numerical abundance	
72-0049	INSTITUTE OF MARINE SCIENCE University of Alaska	April (?) - May (?)	Colville River Delta	Water Column: NH_3, NO_2, NO_3, DON, TDN, PO_4, SiO_3	Water Column: S		

DATA SET I.D.	COLLECTING AGENCY, SHIP	DATES OF MEASUREMENT	AREA	CHEMICAL QUANTITIES MEASURED OR SAMPLED	CONCURRENT PHYSICAL MEASUREMENTS	CONCURRENT BIOLOGICAL MEASUREMENTS	REMARKS
72-0050	INSTITUTE OF MARINE SCIENCE University of Alaska	April (?)	Elson Lagoon	Water Column: O_2			
73-0028	INSTITUTE OF MARINE SCIENCE University of Alaska	Feb. 9, April (?)	Elson Lagoon, Dease Inlet, Colville River Delta	Water Column: O_2, NH_3, NO_3, $NO_3 + NO_2$, DON, TDN	Water Column: T, S		
73-0034	Ice Island NP-22 Soviet Union	Sept. 1973 - 1979	Mendeleyev Ridge, Canada Basin, Chukchi Slope	Water Column: O_2, DOC, POC, PO_4, SiO_3 Sea Ice: DOC, POC, P, Si	Water Column:	Phytoplankton: primary productivity, species composition and numerical abundance Zooplankton: species composition and numerical abundance	

DATA SET I.D.	COLLECTING AGENCY, SHIP	DATES OF MEASUREMENT	AREA	CHEMICAL QUANTITIES MEASURED OR SAMPLED	CONCURRENT PHYSICAL MEASUREMENTS	CONCURRENT BIOLOGICAL MEASUREMENTS	REMARKS
73-0035	UNIVERSITY OF ALASKA Ice Island T-3	Feb. (?)	East Alpha Ridge	Water Column: 3H	Water Column: T, S		
73-0038	INSTITUTE OF MARINE SCIENCE University of Alaska	May 15 - June 11	Colville River Delta	Water Column: NH_3, $NO_3 + NO_2$, PO_4, SiO_3	Water Column: T, S		
73-0043	U.S.C.G.C. Glacier	July 28 - Aug. 12	Alaskan Shelf and Slope	Water Column: chl. a, Hg Bottom Sediment: CO_3, OC, Ca, Cu, Fe, K, Li, Mg, Mn, Na, Ni, Zn	Water Column: T, S	Phytoplankton: species composition and numerical abundance Other: standing stock	WEBSEC-73
73-0044	INSTITUTE OF MARINE SCIENCE University of Alaska	Jan. 5 - June 11	Chukchi Sea near Barrow	Water Column: CO_2, NH_3, $NO_3 + NO_2$, PO_4, SiO_3, pH, chl. a	Water Column: S, surface irradiation	Phytoplankton: primary productivity, nutrient uptake	

DATA SET I.D.	COLLECTING AGENCY, SHIP	DATES OF MEASUREMENT	AREA	CHEMICAL QUANTITIES MEASURED OR SAMPLED	CONCURRENT PHYSICAL MEASUREMENTS	CONCURRENT BIOLOGICAL MEASUREMENTS	REMARKS
73-0044 (cont'd)				Ice Cores: CO_2, NH_3, $NO_3 + NO_2$, PO_4, SiO_3, pH, chl. a			
73-0045	JET PROPULSION LABORATORY California Institute of Technology, Pasadena, California (for Office of Naval Research)	June 28 - Aug. 8	Prudhoe Bay	Water Column: O_2, NH_3, $NO_3 + NO_2$ PO_4	Water Column: T, S	Microbes: numerical abundance, petroleum biodegradation	
73-0046	INSTITUTE OF MARINE SCIENCE University of Alaska	Nov. (?)	Colville River Delta	Water Column: NH_3, NO_3, DON, TDN			
74-0048	U.S.C.G.C. Staten Island	Aug. 7-15	Northeast Chukchi Sea	Water Column: O_2, chl. a	Water Column: T, S		
74-0051	U.S.C.G.C. Staten Island	Aug. 19 - Sept. 5	Alaskan Shelf and Slope	Water Column: chl. a	Water Column: T, S		
						Ice: thickness	

DATA SET I.D.	COLLECTING AGENCY, SHIP	DATES OF MEASUREMENT	AREA	CHEMICAL QUANTITIES MEASURED OR SAMPLED	CONCURRENT PHYSICAL MEASUREMENTS	CONCURRENT BIOLOGICAL MEASUREMENTS	REMARKS
74-0052	INSTITUTE OF MARINE SCIENCE University of Alaska	Aug. (?)	Prudhoe Bay	Bottom Sediment: CO_3, OC, P, Cr, Ni, V, HC Biota: (arctic cisco, four-horned sculpin, arctic char, arctic flounder) HC		Benthos: species composition and numerical abundance	
75-0005D	AIDJEX MAIN EXPERIMENT	May (?)	Canada Basin	Bottom Sediment: (magnetic spherules) Al_2O_3, CaO, Cr_2O_3, K_2O, MgO, MnO, Na_2O, Si, SiO_2, TiO_2, ZnO, Al, Cr, Fe, Mn, Ti			
75-0005E	AIDJEX MAIN EXPERIMENT	June 2 - Sept. 27	Canada Basin	Water Column: NO_3, chl. a		Phytoplankton: primary productivity, ^{14}C assimilation, species composition and numerical abundance Zooplankton: species composition and numerical abundance	

DATA SET I.D.	COLLECTING AGENCY, SHIP	DATES OF MEASUREMENT	AREA	CHEMICAL QUANTITIES MEASURED OR SAMPLED	CONCURRENT PHYSICAL MEASUREMENTS	CONCURRENT BIOLOGICAL MEASUREMENTS	REMARKS
75-0057	U.S. GEOLOGICAL SURVEY Menlo Park, California) R/V Karluk	Aug. (?) - Sept. (?)	Harrison Bay, Simpson Lagoon	Water Column: SPM	Water Column: T, S, currents transmissivity, bathymetry		data not published
75-0072A	UNIVERSITY OF WASHINGTON (for OCSEAP) U.S.G.S. Beaver aircraft and Boston whaler	Aug. 12 - Sept. 16	Pt. Barrow, Prudhoe Bay	Water Column: NH_3, NO_2, NO_3, PO_4, SiO_3, chl. a	Water Column: T, S	Phytoplankton: primary productivity, ^{14}C assimilation standing stock	
75-0072B	OREGON STATE UNIVERSITY (for OCSEAP) U.S.G.S. Beaver aircraft and Boston whaler	Aug. 20 - Sept. 18	Pt. Barrow, Elson Lagoon, Simpson Lagoon, Prudhoe Bay	Water Column: pH Bottom Sediment: pH	Water Column: T, S Bottom Sediment: T, S	Microbes: bacteria counts, oil biodegradation	
75-0072C	UNIVERSITY OF LOUISVILLE (for OCSEAP) U.S.G.S. Beaver aircraft and Boston whaler	Aug. 20 - Sept. 23	Alaskan Shelf	Water Column: NH_3, NO_3, PO_4, SiO_3 Bottom Sediment: NH_3, NO_3, PO_4, SiO_3	Water Column: T, S Bottom Sediment: T, S		

DATA SET I.D.	COLLECTING AGENCY, SHIP	DATES OF MEASUREMENT	AREA	CHEMICAL QUANTITIES MEASURED OR SAMPLED	CONCURRENT PHYSICAL MEASUREMENTS	CONCURRENT BIOLOGICAL MEASUREMENTS	REMARKS
75-0072D	UNIVERSITY OF LOUISVILLE (for OCSEAP)	April (?) 1976	Alaskan Shelf	Water Column: NH_3, NO_3, PO_4 Ice Cores: NH_3, NO_3, PO_4 Bottom Sediment: NH_3, NO_3, PO_4	Water Column: T, S Ice Cores: T, S Bottom Sediment: T, S	Microbes: bacterial counts	
75-0074	INSTITUTE OF MARINE SCIENCE University of Alaska SCUBA divers	Aug. (?)	Prudhoe Bay	Bottom Sediment: CO_3, OC, P, Cr, Cu, Ni, V, BEC, HEC, NAPH, NAPH + CH_2, NAPH + C_2H_4, NAPH + C_3H_6, ANTH or PHEN, ANTH or PHEN + C_2H_4, ANTH or PHEN + C_3H_6, NAPHC or isomer PERY Biota: (arctic char, arctic cisco, least cisco) BEC, HEC	Bottom Sediment: particle grain size distribution, mineralogy	Benthos: species composition and numerical abundance	
76-0046	ALASKA DEPT. OF FISH AND GAME	March 19 - April 19	Sagavanirktok River Delta	Water Column: O_2	Water Column: T, S	Fish: species composition and numerical abundance	oxygen values given as % saturation

DATA SET I.D.	COLLECTING AGENCY, SHIP	DATES OF MEASUREMENT	AREA	CHEMICAL QUANTITIES MEASURED OR SAMPLED	CONCURRENT PHYSICAL MEASUREMENTS	CONCURRENT BIOLOGICAL MEASUREMENTS	REMARKS
76-0057A	UNIVERSITY OF WASHINGTON (for OCSEAP) U.S.C.G.C. Glacier	Aug. 7 - Sept. 4	Alaskan Shelf and Slope	Water Column: NH_3, NO_3, PO_4, chl. a, phaeo.	Water Column: T, S Ice: thickness	Phytoplankton: primary productivity, species composition and numerical abundance Zooplankton: species composition and numerical abundance	
76-0057B	INSTITUTE OF MARINE SCIENCE University of Alaska (for OCSEAP) U.S.C.G.C. Glacier	Aug. 23 - Sept. 5	Alaskan Shelf and Slope	Water Column: Cr, Se Bottom Sediment: Cr, Se			this data set contains some archived sediment samples whose origins have not been determined
76-0057C	INSTITUTE OF MARINE SCIENCE University of Alaska (for OCSEAP) U.S.C.G.C. Glacier	Aug. 23 - Sept. 2	Alaskan Shelf and Slope	Water Column: BEC, HEC Bottom Sediment: BEC, HEC			

DATA SET I.D.	COLLECTING AGENCY, SHIP	DATES OF MEASUREMENT	AREA	CHEMICAL QUANTITIES MEASURED OR SAMPLED	CONCURRENT PHYSICAL MEASUREMENTS	CONCURRENT BIOLOGICAL MEASUREMENTS	REMARKS
76-0057D	INSTITUTE OF GEOPHYSICS AND PLANETARY PHYSICS UCLA (for OCSEAP) U.S.C.G.C. Glacier	Aug. 7 - Sept. 4	Alaskan Shelf and Slope	Bottom Sediment: C, OC, NSHC, AlHC, ArHC			individual concentrations given for n-C_{15} to n-C_{34} plus pristane and phytane
76-0057E	BATTELLE-NORTHWEST LABORATORIES (for OCSEAP) U.S.C.G.C. Glacier	Aug. 7 - Sept. 4	Alaskan Shelf and Slope	Bottom Sediment: Al, As, Ba, Co, Cr, Cs, Eu, Fe, K, La, Mn, Na, Sb, Sc, Sm, Ta, Tb, Th, Ti, V			
76-0058	U.S. ARMY COLD REGIONS RESEARCH AND ENGINEERING LABORATORY and U.S. GEOLOGICAL SURVEY	March (?) - May (?)	Prudhoe Bay	Water Column: HCO_3, SO_4, Cu, K, Mg, Na Bottom Sediment: $CaCO_3$, OC Interstitial Water: HCO_3, Cl, SO_4, pH, Ca, K, Mg, Na	Water Column: S Bottom Sediment: water content		
76-0059	U.S. GEOLOGICAL SURVEY Menlo Park, California	March 20 - April 10	Prudhoe Bay, Colville River Delta	Water Column: SPM	Water Column: T, transmissivity		

DATA SET I.D.	COLLECTING AGENCY, SHIP	DATES OF MEASUREMENT	AREA	CHEMICAL QUANTITIES MEASURED OR SAMPLED	CONCURRENT PHYSICAL MEASUREMENTS	CONCURRENT BIOLOGICAL MEASUREMENTS	REMARKS
76-0060	U.S. GEOLOGICAL SURVEY Menlo Park, California R/V Karluk	July (?) - Sept. (?)	Alaskan Shelf	Water Column: SPM	Water Column: transmissivity, combustible fraction (SPM) Bottom Sediment: S and water content		
76-0061	WOODWARD-CLYDE CONSULTANTS (for Atlantic Richfield Co.)	Aug. (?)	Prudhoe Bay	Bottom Sediment: OC			
77-0063	INSTITUTE OF MARINE SCIENCE University of Alaska	March 30,31 May 23	Dease Inlet, Elson Lagoon	Water Column: PN Ice Cores: PN	Water Column: T, S		
77-0069A	UNIVERSITY OF WASHINGTON (for OCSEAP) U.S.C.G.C. Glacier	Aug. 7 - Sept. 5	Alaskan Shelf and Slope	Water Column: chl. a., phaeo.	Water Column: T, S Ice: thickness	Phytoplankton: primary productivity, species composition and numerical abundance	

DATA SET I.D.	COLLECTING AGENCY, SHIP	DATES OF MEASUREMENT	AREA	CHEMICAL QUANTITIES MEASURED OR SAMPLED	CONCURRENT PHYSICAL MEASUREMENTS	CONCURRENT BIOLOGICAL MEASUREMENTS	REMARKS
77-0069A (cont'd)						Zoobenthos: species composition and numerical abundance Other: Secchi depth	
77-0069B	INSTITUTE OF MARINE SCIENCE University of Alaska (for OCSEAP) U.S.C.G.C. Glacier	Aug. 7 - Sept. 5	Alaskan Shelf and Slope	Bottom Sediment: CO_3, OC, Co, Cr, Cu, Fe, Mn, Ni, V, Zn Interstitial Water: Mn	Bottom Sediment: particle grain size distribution, mineralogy		some archival sediment samples included in this data set
77-0071	INSTITUTE OF MARINE SCIENCE University of Alaska (for OCSEAP)	Aug. 1-17	Simpson Lagoon	Bottom Sediment: CO_3, OC, N, P, Cu, Cr, Fe, Mn, Ni, V, Zn	Bottom Sediment: particle grain size distribution, mineralogy		
77-0072	INSTITUTE OF MARINE SCIENCE University of Alaska (for OCSEAP)	Fall (?), 1977 - Nov. (?) 1979	Alaskan Shelf	Biota: (vegetation, invertebrates, fish, birds, marine mammals) 13C, 14C			

DATA SET I.D.	COLLECTING AGENCY, SHIP	DATES OF MEASUREMENT	AREA	CHEMICAL QUANTITIES MEASURED OR SAMPLED	CONCURRENT PHYSICAL MEASUREMENTS	CONCURRENT BIOLOGICAL MEASUREMENTS	REMARKS
77-0073	INSTITUTE OF MARINE SCIENCE University of Alaska (for OCSEAP)	Aug. (?)	Alaskan Shelf	Bottom Sediment: SHC, USHC			individual concentrations given for n-C_{15} to n-C_{34} plus pristane, phytane and perylene
77-0074	U.S. ARMY COLD REGIONS RESEARCH AND ENGINEERING LABORATORY and U.S. GEOLOGICAL SURVEY	Spring (?)	Prudhoe Bay	Water Column: HCO_3, Cl, SO_4, pH, Ca, K, Mg, Na Bottom Sediment: CO_3, OC Interstitial Water: HCO_3, Cl, SO_4, pH, Ca, K, Mg, Na	Water Column: S Interstitial Water S		
77-0075	WOODWARD-CLYDE CONSULTANTS (for Atlantic-Richfield Co.)	Aug. (?)	Prudhoe Bay	Bottom Sediment: OC			

DATA SET I.D.	COLLECTING AGENCY, SHIP	DATES OF MEASUREMENT	AREA	CHEMICAL QUANTITIES MEASURED OR SAMPLED	CONCURRENT PHYSICAL MEASUREMENTS	CONCURRENT BIOLOGICAL MEASUREMENTS	REMARKS
78-0044	ROSENSTIEL SCHOOL OF MARINE AND ATMOSPHERIC SCIENCE University of Miami, Miami, Florida Pintado (submarine)	Oct. 10-19	Canada Basin, Alpha Ridge, Amundsen Basin	Water Column: ^3H	Water Column: S		
78-0047	INSTITUTE OF MARINE SCIENCE University of Alaska (for OCSEAP)	April 4,5, May 25, June 21-28, July 7,20-29, Aug. 7,8	Alaskan Shelf	Water Column: NH_3, NO_3, PO_4, DIP, TOP, chl. a	Water Column: T, S		
78-0058A	UNIVERSITY OF WASHINGTON (for OCSEAP) U.S.C.G.C. Northwind	Aug. 15 - Sept. 15	Alaskan Shelf and Slope	Water Column: chl. a, phaeo. Interstitial Water: NH_3, $NO_3 + NO_2$	Water Column: T, S Ice: thickness	Phytoplankton: primary productivity, denitrification potential, species composition and numerical abundance Zooplankton: species composition and numerical abundance Other: Secchi depth	

DATA SET I.D.	COLLECTING AGENCY, SHIP	DATES OF MEASUREMENT	AREA	CHEMICAL QUANTITIES MEASURED OR SAMPLED	CONCURRENT PHYSICAL MEASUREMENTS	CONCURRENT BIOLOGICAL MEASUREMENTS	REMARKS
78-0058B	OREGON STATE UNIVERSITY (for OCSEAP) U.S.C.G.C. Northwind	Aug. 15 - Sept. 15	Alaskan Shelf and Slope	Bottom Sediment: ATP, ADP, AMP, total adenylate		Microbes: (bottom sediment) 14C uptake, nitrogen fixation, microbial activity	
78-0058C	INSTITUTE OF MARINE SCIENCE University of Alaska (for OCSEAP) U.S.C.G.C. Northwind	Aug. 17-24	Simpson Lagoon	Water Column: SPM Bottom Sediment: 210Pb			
78-0059	OCSEAP	Nov. 8/78 - May 20/79	Steffanson Sound	Water Column: NH_3, NO_2, NO_3, PO_4, SiO_3, chl. a, phaeo. Ice Cores: NH_3, NO_2, NO_3, PO_4, SiO_3, chl. a, phaeo.	Water Column: S Ice thickness, snow cover Ice Cores: S	Phytoplankton: primary productivity, standing stock, species composition and numerical abundance	

DATA SET I.D.	COLLECTING AGENCY, SHIP	DATES OF MEASUREMENT	AREA	CHEMICAL QUANTITIES MEASURED OR SAMPLED	CONCURRENT PHYSICAL MEASUREMENTS	CONCURRENT BIOLOGICAL MEASUREMENTS	REMARKS
78-0060	OREGON STATE UNIVERSITY (for OCSEAP)	Jan.(?)	Elson Lagoon	Water Column: NH_3, NO_2, NO_3, PO_4 Bottom Sediment: TOC, NH_3, NO_2, NO_3, TON, PO_4 tan		Microbes: (bottom sediment) ^{14}C uptake, nitrogen fixation	
78-0062	INSTITUTE OF MARINE SCIENCE University of Alaska (for OCSEAP)	Aug. 6 - Sept. 3	Simpson Lagoon, Harrison Bay, Prudhoe Bay	Water Column: SPM Suspended Sediment: C, H, N Bottom Sediment: ^{210}Pb Interstitial Water: Co, Fe, Hg, Mn, Zn			
78-0063	U.S. GEOL. SURVEY Menlo Park, California	Spring (?)	Prudhoe Bay, Steffansson Sound, Simpson Lagoon, Colville River Delta, Sagavanirktok River Delta	Ice Cores: SPM	Ice Cores: T, S		

DATA SET I.D.	COLLECTING AGENCY, SHIP	DATES OF MEASUREMENT	AREA	CHEMICAL QUANTITIES MEASURED OR SAMPLED	CONCURRENT PHYSICAL MEASUREMENTS	CONCURRENT BIOLOGICAL MEASUREMENTS	REMARKS
79-0041	WOODWARD-CLYDE CONSULTANTS (for Prudhoe Bay Unit)	Feb. 20 - April 20	Prudhoe Bay	Water Column: O_2	Water Column: T, S, currents, transmissivity	Plankton: species composition and numerical abundance, kelp ecology Fish: species composition and numerical abundance	
79-0042	NORTHERN TECHNICAL SERVICES (for Sohio Alaska Petroleum Co.)	April 6 - Aug. 4	Prudhoe Bay	Water Column: O_2, Ba, Cd, Cr, Cu, Hg, Pb, Zn Bottom Sediment: Ba, Ca, Cr, Cu, Fe, Mn, Ni, Pb, V, Zn Biota (amphipods) Cr, Cu, Pb, Zn (Snail eggs, polychaete tubes, Phycodrys sp., Eunephyta rubiformis, Nereidae unid. sp., Leptosterias sp.) Ba, Cd, Cr, Cu, Fe, Hg, Pb, Zn	Water Column: T, S, currents, transmissivity	Benthos: species composition and numerical abundance, bioassays	

DATA SET I.D.	COLLECTING AGENCY, SHIP	DATES OF MEASUREMENT	AREA	CHEMICAL QUANTITIES MEASURED OR SAMPLED	CONCURRENT PHYSICAL MEASUREMENTS	CONCURRENT BIOLOGICAL MEASUREMENTS	REMARKS
79-0043	WOODWARD-CLYDE CONSULTANTS (for Prudhoe Bay Unit)	July 20 - Aug. 31	Prudhoe Bay	Water Column: O_2	Water Column: T, S, currents, transmissivity	Fish (Larvae): species composition and numerical abundance, ecology of fish and kelp	
79-0050	LOREX ICE STATION	March (?) - May (?)	Lomonosov Ridge, Makarov Basin	Water Column: PO_4, SiO_3, pH, alk_t, Al, Cd, Cu, Fe, Zn, ^{241}Am, ^{137}Cs, ^{3}H, ^{18}O, $^{239}Pu + ^{240}Pu$, ^{90}Sr	Water Column: T, S, currents		
79-0062	OREGON STATE UNIVERSITY (for OCSEAP)	Jan. (?)	Elson Lagoon	Bottom Sediment: ADP, AMP, ATP, total adenylate			
79-0063	INSTITUTE OF MARINE SCIENCE University of Alaska (for OCSEAP)	Nov. 11	Stefansson Sound	Ice Cores: SPM			

DATA SET I.D.	COLLECTING AGENCY, SHIP	DATES OF MEASUREMENT	AREA	CHEMICAL QUANTITIES MEASURED OR SAMPLED	CONCURRENT PHYSICAL MEASUREMENTS	CONCURRENT BIOLOGICAL MEASUREMENTS	REMARKS
79-0064	INSTITUTE OF MARINE SCIENCE University of Alaska (for OCSEAP)	July 24 - Aug. 12	Simpson Lagoon	Water Column: pH, SPM Bottom Sediment: OC, N, CO, Cr, Cu, Fe, Mn, Ni, V, Zn	Water Column: T, S Bottom Sediment: particle grain size distribution		
80-0039	INSTITUTE OF MARINE SCIENCE University of Alaska (for OCSEAP)	July 26 - Aug. 26	Colville River Delta, Simpson Lagoon, Harrison Bay, Prudhoe Bay, Nuvagapak Lagoon	Water Column: SPM Bottom Sediment: CO_3, OC, C, Co, Cr, Cu, Fe, Mn, Ni, V, Zn	Water Column: T, S Bottom Sediment: particle grain size distribution		Nuvagapak Lagoon sediment samples were collected at an earlier, unknown date
80-0047	INSTITUTE OF MARINE SCIENCE University of Alaska (for OCSEAP)	March 5 - Nov. 9	Alaskan Shelf and Slope	Water Column: $NO_3 + NO_2$, PO_4, SiO_3, chl. a, phaeo.	Water Column: S		

DATA SET I.D.	COLLECTING AGENCY, SHIP	DATES OF MEASUREMENT	AREA	CHEMICAL QUANTITIES MEASURED OR SAMPLED	CONCURRENT PHYSICAL MEASUREMENTS	CONCURRENT BIOLOGICAL MEASUREMENTS	REMARKS
80-0048	APPLIED PHYSICS LABORATORY University of Washington Coast Guard Ice Breaker Polar Sea and Ice Camp	Sept. 18 - Oct.	Alaskan Slope, Canada Basin	Water Column: pH	Water Column: T, S, currents		
80-0054	OCSEAP	April 10 - June 11	Stefansson Sound	Water Column: NH_3, NO_2, NO_3, PO_4, SiO_3, chl. a, phaeo. Ice Cores: NH_3, NO_2, NO_3, PO_4, SiO_2, SiO_3, chl.a, phaeo. Bottom Sediment: chl. a, phaeo.	Water Column: S, light attentuation Ice Cores: S	Phytoplankton: primary productivity, standing stock, species composition and numerical abundance Phytobenthos: species composition and numerical abundance Epontic Algae: species composition and numerical abundance	

DATA SET I.D.	COLLECTING AGENCY, SHIP	DATES OF MEASUREMENT	AREA	CHEMICAL QUANTITIES MEASURED OR SAMPLED	CONCURRENT PHYSICAL MEASUREMENTS	CONCURRENT BIOLOGICAL MEASUREMENTS	REMARKS
81-0045	INSTITUTE OF MARINE SCIENCE University of Alaska (for OCSEAP)	April 12-14, May 30 - June 2	Alaskan Shelf	Water Column: NH_3, NO_3 + NO_2, PO_4 Ice Cores: SPM Suspended Solids (in ice): C	Water Column: S	Phytoplankton: standing stock	
82-0016A	INSTITUTE OF WATER RESOURCES University of Alaska (for LGL Ecological Research Associates Inc.)	July 24 - Aug. 7	Nuvagapak Lagoon	Water Column: NH_3, NO_3, PO_4, SiO_3, chl. a, phaeo. Biota: (peat, fish, birds) 13C, 14C	Water Column: S, light attenuation	Phytoplankton: primary productivity	
82-0016B	INSTITUTE OF WATER RESOURCES University of Alaska (for LGL Ecological Research Associates Inc.)	Sept. 18-23	Nuvagapak Lagoon	Water Column: NO_2, NO_3, PO_4, SiO_3, chl. a, phaeo.	Water Column: S		

DATA SET I.D.	COLLECTING AGENCY, SHIP	DATES OF MEASUREMENT	AREA	CHEMICAL QUANTITIES MEASURED OR SAMPLED	CONCURRENT PHYSICAL MEASUREMENTS	CONCURRENT BIOLOGICAL MEASUREMENTS	REMARKS
82-0030	NORTHERN TECHNICAL SERVICES (for ARCO Alaska, Inc.)	April (?)	Prudhoe Bay	Bottom Sediment: CO_3, TOC	Water Column: T, S	Benthos: species composition and numerical abundance	
83-0004A	FROZEN SEA RESEARCH GROUP Institute of Ocean Sciences, Patricia Bay, B.C. Ice Camp CESAR	April 29	Yelverton Inlet	Water Column: NO_3, PO_4, SiO_3	Water Column: T, S		PC-5
83-0005	ARCTIC SCIENCES LTD. (for Institute of Ocean Sciences) Twin Otter Aircraft	March 20 - April 4	Continental Shelf off Queen Elizabeth Islands	Water Column: NO_3, PO_4, SiO_3	Water Column: T, S, S/V		

DATA SET I.D.	COLLECTING AGENCY, SHIP	DATES OF MEASUREMENT	AREA	CHEMICAL QUANTITIES MEASURED OR SAMPLED	CONCURRENT PHYSICAL MEASUREMENTS	CONCURRENT BIOLOGICAL MEASUREMENTS	REMARKS
83-0012	HARDING LAWSON ASSOCIATES (for Exxon Co.)	Feb. 19-26	Alaskan Shelf	Water Column: NO_3 + NO_2, PO_4, SiO_3 Bottom Sediment: Ba, Co, Cr, Cu, Fe, Mn, Ni, Pb, V, Zn	Water Column: S, currents	Benthos: species composition and numerical abundance	
83-0013	NORTHERN TECHNICAL SERVICES (for ARCO Alaska, Inc.)	April (?)	Prudhoe Bay	Water Column: CO_3, TOC	Water Column: T, S	Benthos: species composition and numerical abundance	
83-0023A	SCRIPPS INSTITUTION OF OCEANO-GRAPHY (for Kinnetic Laboratories Inc.)	July 29-31	Peard Bay	Water Column: POC, NH_3, NO_3, PON, PO_4, POP, SiO_3, chl. a, ATP, isotopes		Phytoplankton: primary productivity	analysis still in progress
83-0023B	SCRIPPS INSTITUTION OF OCEANO-GRAPHY (for Kinnetic Laboratories Inc.)	Aug. 23-25	Peard Bay	Water Column: POC, NH_3, NO_3, PON, PO_4, POP, SiO_3, chl. a, ATP		Phytoplankton: primary productivity	

6. INDICES

6.1 Alphabetical Listing of Data Set Occurrence by Geographic Area

6.2 Index of References by Data Set Number

ALASKAN SHELF		ALASKAN SLOPE	ALPHA RIDGE	AMUNDSEN BASIN	CANADA BASIN	CHUKCHI ABYSSAL PLAIN
26-0001	76-0060	51-0001	49-0005	58-0013	49-0005	63-0019
51-0001	77-0069A	52-0002	52-0010	64-0013	50-0007	66-0015
52-0002	77-0069B	59-0001	63-0019	78-0044	50-0008	
54-0001	77-0072	60-0020	66-0019		57-0014	
54-0002	77-0073	62-0021	69-0024		58-0011	
62-0021	78-0047	69-0001	69-0025		60-0013	
69-0001	78-0058A	70-0037	71-0031		63-0019	
69-0022B	78-0058B	71-0020	71-0032		63-0020	
70-0021A	80-0047	72-0027	72-0046		64-0017	
70-0037	81-0045	72-0028	73-0035		65-0013	
71-0020	83-0012	72-0032	78-0044		65-0023	
71-0021		72-0040			66-0015	
71-0022B		73-0043			66-0019	
71-0026		74-0051			67-0020	
72-0027		76-0057A			67-0021	
72-0028		76-0057B			69-0001	
72-0029B		76-0057C			72-0035A	
72-0032		76-0057D			72-0035F	
72-0040		76-0057E			73-0034	
72-0041		77-0069A			75-0005D	
73-0043		77-0069B			75-0005E	
74-0051		78-0058A			78-0044	
75-0072C		78-0058B			80-0048	
75-0072D		80-0047				
76-0057A		80-0048				
76-0057B						
76-0057C						
76-0057D						
76-0057E						

CHUKCHI PLATEAU	CHUKCHI SEA	CHUKCHI SLOPE	COLVILLE RIVER DELTA	CONTINENTAL SHELF	DEASE INLET	DISRAELI FJORD
50-0007	37-0005	73-0034	69-0022A	60-0007	73-0028	67-0010
59-0016	38-0003		69-0022B	83-0005	77-0063	
	64-0024		70-0021A			
	68-0031		71-0022B			
	70-0036A		71-0045			
	70-0036B		72-0029B			
	71-0044		72-0049			
	72-0040		73-0028			
	72-0045		73-0038			
	72-0047		73-0046			
	73-0044		76-0059			
	74-0048		78-0063			
			80-0039			

ELSON LAGOON	HARRISON BAY	LINCOLN SEA	LOMONASOV RIDGE	MAKAROV BASIN	MENDELEYEV ABYSSAL PLAIN	MENDELEYEV RIDGE
72-0050	69-0022A	71-0013	52-0010	49-0005	63-0019	41-0001
73-0028	69-0022B		54-0014	50-0008	67-0019	49-0005
75-0072B	70-0021A		58-0013	54-0014	67-0021	54-0015
77-0063	71-0022B		64-0013	79-0050		57-0011
78-0060	75-0057	79-0050				63-0019
79-0062	78-0062					66-0019
	80-0039					73-0034

NANSEN SOUND	NORTHWIND ABYSSAL PLAIN	NORTHWIND RIDGE	NUVAGAPAK LAGOON	PEARD BAY	POINT BARROW	PRUDHOE BAY
64-0008	66-0015 66-0018	54-0001	80-0039 82-0016A 82-0016B	83-0023A 83-0023B	75-0072A 75-0072B	71-0035 73-0045 74-0052 75-0072A 75-0072B 75-0074 76-0058 76-0059 76-0061 77-0074 77-0075 78-0062 78-0063 79-0041 79-0042 79-0043 80-0039 82-0030 83-0013

STEFANNSON SOUND	SAGAVANIVKTOK RIVER DELTA	SIMPSON LAGOON	YELVERTON INLET
78-0059	76-0046	70-0021A	83-0004A
78-0063	78-0063	71-0022B	
79-0063		71-0025	
80-0054		72-0029B	
		75-0057	
		75-0072B	
		77-0071	
		78-0058C	
		78-0062	
		78-0063	
		79-0064	
		80-0039	

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